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RESPONSE AFTER FINAL REJECTION
EXPEDITED PROCEDURE
GROUP ART UNIT 1755
PATENT

Customer No. 22,852

Attorney Docket No. 01222.0034-00000

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

David A. RUSSO et al.

Application No.: 09/544,212

Filed: October 17, 1995

For: COATING COMPOSITION FOR
GLASS

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) Group Art Unit: 1755
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) Examiner: D. Brunsman
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10/24/02
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Commissioner for Patents
Washington, DC 20231

Sir:

RESPONSE PURSUANT TO 37 C.F.R. § 1.111

Applicants respond to the June 4, 2002 Office communication concerning this application and extend the time to reply by two months with the petition for an extension of time and extension fee submitted with this response.

THE NON-PRIORITY PCT APPLICATIONS

The Examiner indicates on page 2, paragraph 2 of the Office Action he no longer relies on the "non-priority" PCT applications, PCT/US 92/10872 and PCT/US 92/10874 as part of the prosecution history that bears on the present application, and which the Examiner previously looked to regarding the recapture issue. Even though the Examiner withdraws the rejection based on the "non-priority" PCT applications because

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he has "no adjudicated finding" (June 4, 2002 Office Action, p. 2, par. 2) to support it, applicants maintain their traverse of this aspect of the recapture rejection for reasons previously submitted in the prosecution of this application, which applicants incorporate herein by reference.

THE REJECTION UNDER 35 U.S.C. § 251 AND TRAVERSE

The Examiner rejected claims 28, 29, 31-60, 65-66 under 35 U.S.C. § 251 as improperly recapturing broadened claim subject-matter surrendered in the application for the patent (the "reissue patent" Russo et al., U.S. Patent No. 5, 401, 305) which forms the basis for the present reissue application. Applicants traverse the rejection and request further consideration and reexamination.

In the paragraph immediately preceding the Examiner's rejection of the claims under 35 U.S.C. § 251 the Examiner stated "[t]he issue of recapture with respect to the new categories of invention (see MPEP § 1412.03) filed with the reissue need not be resolved unless those claims are limited to the particular precursor compositions of the patented claims." (June 4, 2002 Office Action, p. 2, par. 3). Applicants will summarize the claims as follows in order to analyze this position taken by the Examiner.

The reissue patent contains claims 1-27 directed to a composition of matter. Newly added reissue claims 28, 29, 31 and 32 also relate to a composition of matter. The claims falling within the so-called "new categories of invention" comprise claims 33-60 directed to a film and an article of manufacture comprising the film on a substrate, and claims 65-66 which relate to a product produced by the process of oxidizing the composition of any one of claims 1-29 and 31-32.

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Applicants point out M.P.E.P. § 1412.03 referred to by the Examiner does not relate to issues of recapture but rather criteria for determining whether applicants have submitted broadened reissue claims. The new categories of invention as set out in the film and article of manufacture claims 33-60 and product-by-process claims 65-66 meet these criteria of broadened reissue claims since they include "subject matter not covered by the patent claims." (M.P.E.P. § 1412.03, p.1400-16, August 2001).

The Examiner then rejected the film and article of manufacture claims 31-60 and product-by-process claims 65-66 on grounds of improper recapture of broadened claim subject matter surrendered in the reissue patent, but the Examiner did not articulate how or where applicants surrendered this broadened claimed subject matter in the reissue patent. The Examiner also cited three decisions of the Court of Appeals for the

Federal Circuit to support his recapture argument, however, did not show how those cases applied to the facts or claims of the present application, other than to conclude these claims allegedly recaptured subject matter applicants surrendered in the prosecution of the reissue patent. (June 4, 2002 Office Action, p. 2, par. 4.)

For Example, the Examiner cited Hester Industries, Inc. v. Stein, Inc., 142 F.3d 1472, 46 U.S.P.Q. 2d 1641 (Fed. Cir. 1998) which held that arguments made during the prosecution of an application to distinguish features of the prior art prevented the applicant from claiming those features in a reissue patent. The Examiner has not identified any arguments applicants made in the prosecution of the reissue patent that bear on the claims of the reissue application.

The other two cases cited by the Examiner, In re Clement, 131 F.3d 1464, 45 U.S.P.Q. 2d 1161 (Fed. Cir. 1997, and Ball Corp. v. United States 729 F.2d 1429, 1436,

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221 U.S.P.Q. 289, 295 (Fed. Cir. 1984) have no bearing on the present application, not only for the reason that the Examiner did not show how they applied to the application, but also for the reasons applicants gave at pages 21-25 of their March 29, 1998 amendment which responded to the Examiner's recapture rejection. Applicants incorporate this part of the March 29 amendment by reference. Basically the rejection applicants responded to on March 29 argued that the amendments responsive to the silicon oxide precursor rejection in the reissue patent did not apply to the new category of metal oxide precursors presented in the reissue application claims, since the Examiner did not reject the metal claims in the reissue patent. Applicants also pointed out that any statements about silicon in the reissue patent and prosecution did not carry over to the metals since silicon is not a metal.

The principle that controls the prosecution of the present reissue application, however, holds that where the prosecution history shows that prior art did not motivate an amendment, and the record does not show that the patentee's conduct amounts to an admission that the reissue claims would not be patentable without the specific limitations of an amendment, recapture does not apply. A claim amendment responsive to an indefiniteness rejection and not a prior art rejection precludes application of the recapture doctrine based on deliberate surrender. In re Wesseler, 367 F.2d 838, 847, 151 U.S.P.Q. 339, 346-47 (C.C.P.A. 1966). The court in Wesseler found that an indefiniteness rejection led to the inclusion of an element in the claims by amendment, not a rejection over prior art, even though the Examiner made a prior art rejection. The court ruled that in the absence of facts showing that the inclusion of the omitted limitations was required to avoid the prior art, the recapture principle of deliberate

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surrender based on the Supreme Court's prosecution history estoppel analysis in Shepard v. Carrigan, 116 U.S. 593, 597, 6 S. Ct. 493, 495 29 L.Ed. 723 (1886), was not applicable. The court stated:

Here, however, there is no objection to the appealed [reissue] claims based on prior art. We do not think the statement in Shepard, arising from the facts therein stated, is applicable here. Shepard may be support for the rule that one who deliberately adds a limitation to avoid the prior art cannot omit that limitation in reissue claims so as to encroach upon the prior art, but that is not the situation here

....
Id. 367 F.2d at 849, 151 U.S.P.Q. at 348 (emphasis added). In view of other portions of the prosecution history showing that the patentee did not intend to abandon coverage of its invention without the omitted limitation, the court concluded the applicants could correct the error by reissue, indicating:

the record established that the appellant erroneously considered he was securing protection commensurate with the invention disclosed in the original application. There is no evidence that appellant intentionally omitted or abandoned the claimed subject matter. We find that while appellant acted "deliberately" he did so in error. This error, in view of the facts of record, was an 'error without any deceptive intention' which entitles appellant to secure a reissue of his patent under the provisions of section 251.

Id. 367 F.2d at 850, 151 U.S.P.Q. at 349 (emphasis in original).

Finally, the Wessler court also noted that a "deliberate" amendment to create a recapture type estoppel did not arise just because an applicant submitted a written amendment to further prosecution. "Deliberate" requires that the patentee knowingly, without error, made the amendment ("every paper formally submitted is generally done 'deliberately' and with the design of advancing the prosecution so as to secure a patent.

. . . [T]hat is not what is meant by the term 'deliberate.'" In re Wessler, 367 F.2d 838,

848, 151 U.S.P.Q. 339, 347 (C.C.P.A. 1966)) The court reversed the rejection of the reissue claims that omitted a limitation added to an original claim where the prosecution record did not clearly show that the patentee had "deliberately" included the limitation to avoid prior art but that the patentee had intended to claim his invention commensurate in scope with what he disclosed.

Applicants emphasize the new category of invention covered by claims 33-60 all relate to a film or an article of manufacture, which they never claimed in the reissue patent. Claims 65-66 relate to a product produced by the process of oxidizing the compositions of claims 1-29 and 31-32 which applicants also never claimed in the reissue patent. Accordingly, the Examiner never rejected these claims in the reissue patent; applicants never amended them in the reissue patent, and never cancelled them from the reissue patent. The present reissue application presents claims of this type for the first time in the prosecution of this aspect of applicants' invention, and as a result the recapture criteria relied on by the Examiner have no bearing on these claims.

The Examiner nonetheless compares the film, article of manufacture and product-by-process claims of the present reissue application to the composition claims presented in the reissue patent, and the amendments applicants made to those composition claims to respond to a 35 U.S.C. § 112 first paragraph rejection. Those amendments further defined the silicon oxide precursors. Importantly, the Examiner did not reject the reissue patent claims on prior art, only 35 U.S.C. § 112.

The Examiner cannot look to those amendments of the composition of matter claims in the reissue patent, (one statutory class of invention) and conclude applicants gave up rights to film claims, article of manufacture claims and product-by-process

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claims in the reissue application (different statutory classes of invention) by the reissue patent prosecution. The amendments in the reissue patent directed toward composition claims do not carry over to film claims, article of manufacture claims or product-by-process claims in the present reissue application since they comprise different statutory classes of inventions. Different statutory classes of invention are separate inventions. Studiengesellschaft Kohle mbH v. Northern Petrochemical Company, 784 F.2d 351, 228 U.S.P.Q. 837, 839 (Fed. Cir. 1986). They differ in that infringement of one type of claim doesn't carry any presumption of infringement of the other. Prosecution of the reissue patent composition claims therefore has no bearing on the film claims, or article of manufacture claims in the present application.

The Examiner, however, argues the instant claims contain subject matter broader than the reissue patent claims in that they do not include the "rate of deposition greater than 350Å/sec." recited in the reissue patent claims. Bearing in mind the reissue patent only contains composition claims, applicants point out the present reissue application claims 28, 29, 31 and 32, and 65-66 similarly comprise composition claims and product by process claims based on the composition, and as with the reissue patent, also claim the composition as having a "rate of deposition greater than 350Å/sec." Applicants therefore request the Examiner to withdraw the foregoing rejection with regard to claims 28, 29, 31 and 32, and 65-66 since they include the same deposition rate parameters as the reissue patent.

As to the Examiner's rejection that Claims 33-60 also do not contain the composition claim's limitation of the deposition rate, applicants point out claims 33-60 relate to a film or a film on a substrate. Applicants never stated the claimed film

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depended on the deposition rates the Examiner employs in his rejection. The written description supports the applicants in this regard by describing the "invention . . . [as] a gaseous composition for producing an improved coating on glass . . ." (written description col. 4, lines 13 et seq.), i.e., the invention not only is a gaseous composition but also an "improved coating." Although this part of the written description describes a process for "producing" this coating on glass by a CVD rate greater than about 350Å/sec., this parameter only refers to one method for producing the coating and not the coating itself. The Examiner has no basis to confine the applicants to a film or an article of manufacture made by a specific process when the written description clearly states applicants' invention relates to an "improved coating."

Accordingly, the Examiner's reference on page 3 of the June 4, 2002 Office Action to the statement in the written description that "the invention is made by CVD rates greater than about 350Å/sec." takes that aspect of the disclosure out of the context of the entire statement of the invention in column 4, lines 13 et seq., and a fair reading of this would show that "CVD rates greater than about 350Å/sec." relate only to one aspect of the invention and should not be construed to indicate that applicants cannot claim another aspect of the invention, i.e., the film and article of manufacture defined in claims 33-60.

The film exhibits "specific properties such as, e.g., controlled refractive index, abrasion resistance, color enhancement, low emissivity, selective light filtration, and anti-iridescence . . ." (Written description, col. 4, lines 16-18) The Examiner has not shown where in the disclosure applicants obtained these features by applying the film at

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a rate of 350Å/sec., nor can he, since applicants obtain these advantages in the film itself, and not by the method of improving production speeds.

The Examiner goes on to state:

Compositional limitations were added in response to Examiner's rejection of the claims as not enabled for the required deposition rates. Examiner's action specifically stated, "The prior art of record fails to teach or suggest a gaseous composition comprising the recited tin oxide precursor, silicon oxide precursor and accelerant selected from borates, phosphates [sic, phosphites] and water". The claims were amended to be limited to those specific materials in response to the rejection. (June 4, 2002 Office Action, p. 3, par. 1).

As to the first contention of the Examiner that applicants added limits to the composition in response to the Examiner's rejection, the Examiner implies that applicants amended the silicon oxide precursors, the tin oxide precursors and the accelerants in response to his rejection relative to the deposition rates. A review of the September 20, 1994 Office Action in the reissue patent and applicants' October 25, 1994 Response will show that the applicants did not do this, but only amended the silicon oxide precursors to obtain allowance. Applicants did not amend the tin oxide, organic phosphite and organic borate accelerants to obtain allowance, nor did the Examiner require these amendments for allowance.

In the September 20, 1994 Office Action in the reissue patent the Examiner rejected claims 1-10, 14-23, 25 and 26 under 35 U.S.C. § 112, first paragraph on the grounds that the disclosure only enabled "claims limited [to] compositions wherein the silicon oxide precursor is limited to that recited in claim 11." (September 20, 1994 Office Action, p. 2, par.1) (emphasis added). The Examiner concluded the rejection on page 2, last paragraph of the September 20, 1994 Office Action by indicating he would

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allow the claims if applicants rewrote them to overcome the rejection under 35 U.S.C. § 112 and include all of the limitations of claim 11 in the base claim and intervening claims. Applicants' October 25, 1994 Amendment in response to that Office Action cancelled claim 11 and inserted the "silicon oxide precursor . . . recited in claim 11" into the claims the Examiner rejected.

Only after the Examiner indicated allowability if the claims were amended to include the silicon oxide precursor recited in claim 11 did he make the statement on page 3 of the September 20, 1994 Office Action that "[t]he prior art of record fails to teach or suggest a gaseous composition comprising the recited tin oxide precursor, silicon oxide precursor and accelerant selected from borates, phosphites and water." Taking this quotation totally out of context, the Examiner then incorporated it into his June 4, 2002 Office Action to argue "[t]he claims were amended to be limited to those specific materials in response to the rejection." (June 4, 2002, Office Action, p. 3, par. 1). "Those specific materials" would include not only the silicon oxide precursors, but also the tin oxide precursors, and the organic phosphite and organic borate accelerants.

As to this second contention, the Examiner never indicated in the reissue patent he would allow the claims on the condition that the applicants also amend the tin oxide precursor and the accelerant selected from organic borates and organic phosphates. The foregoing analysis of the September 24, 1994 Office Action shows the Examiner's indication of allowable subject matter in the reissue patent only related to amending the silicon oxide precursor to conform to the claim 11 description of this material. The following analysis of the October 25, 1994 Response also shows that the amendments of the tin oxide precursors, and the organic phosphite and organic borate accelerants

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were not required for allowance, and were not "limited to those specific materials in response to the rejection." as the Examiner now contends. In fact, the Examiner never rejected these "specific materials."

Applicants in their October 25, 1994 Amendment, not only amended the claims to include the claim 11 definition of the precursors of silicon oxide, but also amended the description of the tin oxide precursors, the organic phosphites and organic borates, even though not required by the Examiner to obtain allowance. Specifically, applicants added new independent claim 27 defining the tin oxide precursor with a generic formula and added claims 28 and 29 relating to a subgenus and a species of the precursor of the tin oxide. The Examiner did not require the generic formula which broadened the tin oxide precursors, or the species of tin oxide precursors for allowance, but he entered these amendments and allowed these claims.

The October 25, 1994 amendment also introduced generic formulas for the organic phosphite and organic borate accelerants of claim 6 and new claim 27, even though not required by the Examiner for allowance of the claims. The Examiner did not suggest these generic formulas which broadened the claims, but he nonetheless entered the amendments and allowed these claims. Claim 24 as originally presented related to a species of an organic phosphite whereas claim 25 as originally filed referred to these accelerants as boron and phosphorous esters. The Examiner did not have any objection to this terminology. New claims 28 and 29 referred to species of organic phosphites and organic borates even though the Examiner did not require an amendment to add these claims which he also allowed.

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The foregoing clearly illustrates the Examiner only required one amendment for allowance, and that was for the silicon oxide precursor, which the applicants included in the composition claims of the reissue patent and which applicants also include in the composition and product by process claims of the present reissue application, i.e., claims 28, 29, 31 and 32, and claims 65-66.

Any amendments to the tin oxide precursors and the accelerants selected from organic phosphites and organic borates in the reissue patent do not introduce the recapture doctrine into the present application for at least two reasons. In the first instance, and most important, the applicants did not cancel any tin oxide precursor or accelerant selected from organic phosphites and organic borates from any of the claims in the reissue patent, and are not now trying to reintroduce cancelled material by way of this reissue application. In fact they did just the opposite when they amended on October 25, 1994 by adding broadening generic formulas for the tin oxide precursor, and the accelerants as well as species of these materials. Secondly they did not amend the tin oxide precursor, or the accelerants to address a 35 U.S.C. § 112 rejection, a prior art anticipation or obviousness rejection, or any other rejection by the Examiner.

The reissue patent issued with claims composition claims having a tin oxide precursor and organic phosphite, organic borate, or water accelerants. The present reissue application now introduces film and article of manufacture claims that include metal oxide precursors based on compounds not only of tin, but also germanium, titanium, aluminum, zirconium, zinc, indium, cadmium, hafnium, tungsten, vanadium, chromium, molybdenum, iridium, nickel, and tantalum, and accelerants including phosphites, borates, water, alkyl phosphine, arsine and borane derivatives, PH_3 , AsH_3 ,

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B₂H₆, NF₃, NO₂, and CO₂. The written description supports these compounds at Column 4, lines 13-52.

The Examiner has failed to demonstrate how the amendments to the tin oxide precursors and the organic phosphite and organic borate accelerants in the composition claims of the reissue patent preclude the applicants from claiming any of the foregoing metal oxide precursors and accelerants in the film and article of manufacture claims in this reissue application. Specifically, applicants ask how does the amendment of the tin oxide precursor preclude them from precursors based on, for example germanium where the applicants never stated or indicated in the reissue patent that the invention did not include compounds based on germanium or the other metals listed in the written description at column 4 lines 21-26? The rejection also raises the same question regarding the accelerants.

The Examiner in the June 4, 2002 Office Action (p.3, par. 1) cites M.P.E.P. § 1412.01 (penultimate paragraph) as the basis for his argument that the "instant claims are not drawn to the same invention as that disclosed as being the invention in the original patent." That section of the Manual doesn't support the position he takes. It only states that if the "specification" describes a compound (e.g. "compound X") as unsuitable, and after the patent issues the applicants find they can use "compound X," the original disclosure of unsuitability precludes them from obtaining a reissue patent for this compound. The Examiner, however, has not pointed to anything in the written description of the reissue patent or its prosecution history that amounts to a statement by the applicants that they determined or found the metal oxide precursors and the accelerants now claimed in this reissue application unsuitable. Nor can he; the reissue

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patent, on the contrary, describes each of the presently claimed metal oxide precursors and accelerants as part of the invention. (Written description, col. 4, lines 13-52.)

The written description does describe one aspect of the invention as providing a process and composition for depositing a silicon oxide film at deposition rates greater than about 350Å/sec., and listed several silicon oxide precursor compounds found to provide this deposition rate. (Written description, par. bridging cols. 2-3, and col. 3, first full par.). These compounds, however, only comprised the silicon oxide precursors, and not the metal oxide precursors and accelerants. Reissue application composition claims 28, 29 and 31, 32, and product by process claims 65-66 include not only these silicon oxide precursors, but also metal oxide precursors and accelerants applicants did not claim in the reissue patent. This statement relative to certain silicon oxide

precursors therefore should not preclude applicants from now claiming their use in compositions and products produced by an oxidation process that combine them with metal oxide precursors and accelerants applicants did not claim in the reissue patent.

Applicants' statement about the silicon oxide precursors applied to the composition, but the film itself or the film on a substrate comprise a separate invention which they now claim in this reissue application. Again, as pointed out above in this response, applicants indicated in their written description that the invention not only pertained to the composition, but also to an "improved coating" or film. In the discussion of the invention in column 4, lines 13-18 of the written description, applicants separated the "improved coating" or film of the invention from the composition and process of depositing the coating at a rate of 350Å/sec.

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Offer in the Alternative to Dedicate Claims to the Public

If, despite the above arguments, the Examiner continues to maintain that claims 33-60, 65-66 can be rejected on the grounds that applicants have attempted to recapture subject matter that should have entered into the public domain by being previously abandoned in the prosecution of the reissue patent, then applicants, in the alternative traverse the "recapture" rejection by offering to dedicate back to the public, reissue claims 33-60, 65-66 when and if granted only to applicants in this reissue application, and when and if an interference is declared with Neuman et al. U.S. Patents Nos. 5,776,236 ("Neuman '236") and 5,559,387 ("Neuman '387"), and Athey et al. U.S. Patent No. 5,356,718 ("Athey"). Applicants do not by this offer dedicate, or offer to dedicate, directly or by implication, the claims previously issued to them in the reissue patent, or the compositions of matter employed in the product by process claims 65-66. Applicants, upon being awarded in the interference the claims that are the subject of this offer to dedicate, will put them back into the public domain by this dedication where they belong if recapture is a valid rejection and if applicants were in fact the first inventors and previously dedicated them to the public through abandonment.

Applicants point out that Neuman '236, Neuman '387, and Athey contain claims to substantially the same subject matter as applicants' claims 33-60, 65-66. If the Examiner's contention is correct that the subject matter of these claims had been previously abandoned, and by implication dedicated to the public by applicants, then the issuance of these patents have in effect eliminated that so-called dedication, since these patents recaptured that subject matter from the public domain.

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